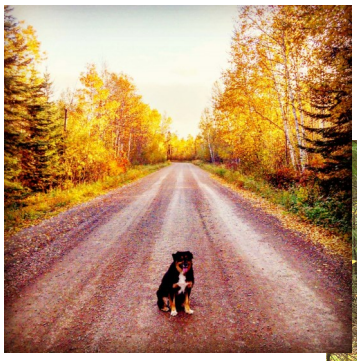
Superior National Forest

Fall Color Report

October 14, 2016

I've looked on the hills of the stormy North And the larch has hung his tassels forth.
— Felicia Hemans



Around here, the American larch, or tamarack, is the loudest voice in the closing chorus of autumn color. They are a pretty tree; the short, profuse, pale green needles giving the tree a delicate wispy appearance unlike the solemn stolidity of red and white pine, or the brooding darkness of spruce. On a foggy summer morning, tamaracks coated in dew sparkle as the sun comes out, but mostly they hide camouflaged in the forest, afraid in their delicacy to stand out from their more stalwart companions. In late fall though, watch out. The tamaracks give up any hint of blending in, and loudly proclaim themselves in golden fireworks and trumpets against the greens of the other conifers. Unlike the yellow of maple, aspen, and birch, tamaracks are a brassy gold color which both stands out in dark areas and complements the browns of the bogs and wetlands in which they are often found.

Despite its delicate appearance, a tamarack is anything but delicate. The wood is rot resistant and relatively flexible, and the Abnoki of the Andirondacks called it 'hackmatack', meaning 'snowshoe wood'. It is used in wooden boats, house siding, and fence posts and anywhere people need a waterproof wood. Relatives of the tamarack grow farther north than any other tree, and in our woods, tamaracks can often be found in bogs and other areas where other trees dare not grow.

But why drop their needles? Other deciduous trees have wide flat leaves which maximize photosynthesis in the summer. During winter, those leaves would lose too much water in a time when free water is scarce. They also would hold snow, possibly leading to broken branches. So, even though it costs the trees the ability to photosynthesize, leaves are dropped in the fall. Pines can keep their needles and continue to photosynthesize all winter because the waxy coating which makes needles stiff also keeps them from losing moisture. The needle shape further reduces moisture loss, and is able to collapse like an umbrella to shed snow. The drawback is needles don't catch much sun, and photosynthesis is reduced. Tamaracks seem to have split the difference. They have many needles, allowing them to catch more sun and ramp up photosynthesis during the summer, but unfortunately creating more surface area from which to lose water. The needles are soft and light green, which might make them metabolically cheaper to produce, but also makes them less waxy and more prone to drying out and being damaged. It might be this compromise is what allows tamaracks to live in so many harsh locations, but it also means tamaracks have to drop needles in the fall, though they are one of the last trees to turn color, hanging on to needles and photosynthesis right to the bitter end.

Honeymoon Trail, Oct. 13, 2016

While it is fun to consider the "why" behind their display, it is maybe best to just enjoy their beauty as they come into their glory here in late fall, adding those golden notes to the final movement of the autumnal symphony. Soon it will be over, and the forest will fall into a hushed silence under the snow, waiting for the opening notes of spring again.

Right now, it is the peak of aspen and birch color along Lake Superior, but inland and through much of the forest, fall is on the decline. Except, of course, for those loud tamaracks.